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EXAMINER	
WONG, ALLEN C	

ART UNIT	PAPER NUMBER
2621	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/606,216	MPR ET AL.	
	Examiner	Art Unit	
	Allen Wong	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 August 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 June 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 18-23 have been considered but are moot in view of the new ground(s) of rejection.

2. The objection to claim 13 is withdrawn. Also, the 35 U.S.C.112, 2nd paragraph rejection are withdrawn.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 18, 20, 22 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Ozcelik (5,903,311).

Regarding claim 18, Ozcelik discloses a circuit for displaying interlaced frames (col.6, ln.17-18, ln.21-23 and ln.39-40), said circuit comprising:

a memory for storing a first portion of a field (col.12, ln.35-41; Ozcelik discloses that the frame memory 514C has a capacity to store 0.53x, where the first portion, ie. top field, is stored in 0.03x capacity of the frame memory 514C);

a display engine for displaying the first portion of the field (col.12, ln.19-34; Ozcelik discloses that the first portion, ie. top field, is displayed for a frame); and

a controller for writing a second portion of the field in the memory, while the display engine displays the first portion of the field (col.12, ln.19-41; Ozcelik discloses

the second portion, ie. bottom field, of the frame is written or buffered for storage while the first portion, ie. top field, is displayed).

Regarding claim 20, Ozcelik discloses wherein the controller decodes the second portion of the field (col.12, ln.19-24).

Regarding claim 22, Ozcelik discloses wherein: the display engine displays the second portion of the field responsive to displaying the first portion of the field (col.12, ln.19-34); and the controller overwrites the first portion of the field with a first portion of another field while the display engine displays the second portion of the field (col.12, ln.1-18; note use of motion compensation to obtain the B-frame from data of the reference frame data I and P frames).

Regarding claim 23, Ozcelik discloses wherein the memory further comprises: a first prediction frame buffer for storing a first prediction frame (fig.5, element 514A); a second prediction frame buffer for storing a second prediction frame (fig.5, element 514B); and a delta frame buffer for storing the first portion of the field and the second portion of the field (col.12, ln.19-41, note element 514C stores the third frame, and there is 0.03x capacity of the frame buffer 514C dedicated to storing the first portion, ie. top field, and 0.5x capacity of the frame buffer 514C dedicated to storing the second portion, ie. bottom field, so delta frame buffers are implemented).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ozcelik (5,903,311).

Regarding claim 19, Ozcelik discloses overwriting data (col.12, ln.19-34, note data can be overwritten in element 514, as noted with the two-way arrow for indicating constant access of data memory for storage). Ozcelik does not specifically disclose the use of third and fourth portions of a frame. However, Ozcelik teaches the use of a subpicture decoder (col.7, ln.45-64, Ozcelik discloses that element 420 of figure 4 is a subpicture decoder used to decode multiple subpicture portions of image data within a frame for decoding images utilized in DVD applications, thus permitting use of first, second, third, fourth, fifth or more sections for storing multiple sections or portions of image data). Therefore, it would have been obvious to one of ordinary skill in the art to appropriately modify Ozcelik's invention for utilize frame data in that the frame data can be subdivided into multiple portions of image data as desired or needed (ie. displaying DVD imaging applications, etc.) for image storage purposes.

Regarding claim 21, Ozcelik discloses wherein: the display engine displays the second portion of the field responsive to displaying the first portion of the field (col.12, ln.19-34; Ozcelik discloses that the second portion, ie. bottom field, is displayed for a frame, responsive to the display of the first portion of the field); and the controller overwrites the first portion of the field in the memory (col.12, ln.19-34, note data can be overwritten in element 514, as noted with the two-way arrow for indicating constant

access of data memory for storage). Ozcelik does not disclose "fourth portion of the field". However, Ozcelik teaches the use of a subpicture decoder (col.7, ln.45-64, Ozcelik discloses that element 420 of figure 4 is a subpicture decoder used to decode multiple subpicture portions of image data within a frame for decoding images utilized in DVD applications, thus permitting use of first, second, third, fourth, fifth or more sections for storing multiple sections or portions of image data). Therefore, it would have been obvious to one of ordinary skill in the art to appropriately modify Ozcelik's invention for utilize frame data in that the frame data can be subdivided into multiple portions of image data as desired or needed (ie. displaying DVD imaging applications, etc.) for image storage purposes.

5. Claims 1-5, 7-12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ozcelik (5,903,311) in view of Uz (6,130,963).

Regarding claim 1, Ozcelik discloses a method for displaying frames, said method comprising: displaying a first portion of a frame (col.12, ln.19-34; Ozcelik discloses that the first portion, ie. top field, is displayed for a frame); and writing a second portion of the frame while displaying the first portion of the frame (col.12, ln.19-41; Ozcelik discloses the second portion, ie. bottom field, of the frame is written or buffered for storage while the first portion, ie. top field, is displayed).

Ozcelik does not specifically disclose "progressive frames". However, Uz teaches the displaying of progressive frames (col.4, ln.29-43; Uz discloses the decoding and displaying of progressive frames). Therefore, it would have been obvious to one of

ordinary skill in the art to combine the teachings of Ozcelik and Uz, as a whole, for efficiently displaying high quality progressive video images while reducing noise (UZ col.3, ln.11-13).

Regarding claims 2 and 8, Ozcelik discloses overwriting data (col.12, ln.19-34, note data can be overwritten in element 514, as noted with the two-way arrow for indicating constant access of data memory for storage). Ozcelik does not specifically disclose the use of third and fourth portions of a frame. However, Ozcelik teaches the use of a subpicture decoder (col.7, ln.45-64, Ozcelik discloses that element 420 of figure 4 is a subpicture decoder used to decode multiple subpicture portions of image data within a frame for decoding images utilized in DVD applications, thus permitting use of first, second, third, fourth, fifth or more sections for storing multiple sections or portions of image data). Therefore, it would have been obvious to one of ordinary skill in the art to appropriately modify Ozcelik's invention for utilize frame data in that the frame data can be subdivided into multiple portions of image data as desired or needed (ie. displaying DVD imaging applications, etc.) for image storage purposes.

Ozcelik does not specifically disclose "progressive frames". However, Uz teaches the displaying of progressive frames (col.4, ln.29-43; Uz discloses the decoding and displaying of progressive frames). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Ozcelik and Uz, as a whole, for efficiently displaying high quality progressive video images while reducing noise (UZ col.3, ln.11-13).

Regarding claims 3 and 9, Ozcelik discloses wherein writing the second portion of the frame further comprises: decoding the second portion of the frame (col.12, ln.19-24). Ozcelik does not specifically disclose "progressive frames". However, Uz teaches the displaying of progressive frames (col.4, ln.29-43; Uz discloses the decoding and displaying of progressive frames). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Ozcelik and Uz, as a whole, for efficiently displaying high quality progressive video images while reducing noise (UZ col.3, ln.11-13).

Regarding claims 4 and 10, Ozcelik discloses wherein: the display engine displays the second portion of the field responsive to displaying the first portion of the field (col.12, ln.19-34; Ozcelik discloses that the second portion, ie. bottom field, is displayed for a frame, responsive to the display of the first portion of the field); and the controller overwrites the first portion of the field in the memory (col.12, ln.19-34, note data can be overwritten in element 514, as noted with the two-way arrow for indicating constant access of data memory for storage). Ozcelik does not disclose "fourth portion of the field". However, Ozcelik teaches the use of a subpicture decoder (col.7, ln.45-64, Ozcelik discloses that element 420 of figure 4 is a subpicture decoder used to decode multiple subpicture portions of image data within a frame for decoding images utilized in DVD applications, thus permitting use of first, second, third, fourth, fifth or more sections for storing multiple sections or portions of image data). Therefore, it would have been obvious to one of ordinary skill in the art to appropriately modify Ozcelik's invention for utilize frame data in that the frame data can be subdivided into

multiple portions of image data as desired or needed (ie. displaying DVD imaging applications, etc.) for image storage purposes.

Ozcelik does not specifically disclose "progressive frames". However, Uz teaches the displaying of progressive frames (col.4, ln.29-43; Uz discloses the decoding and displaying of progressive frames). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Ozcelik and Uz, as a whole, for efficiently displaying high quality progressive video images while reducing noise (UZ col.3, ln.11-13).

Regarding claims 5 and 11, Ozcelik discloses further comprising: displaying the second portion of the frame responsive to displaying the first portion of the frame (col.12, ln.19-34); and overwriting the first portion of the frame with a first portion of another frame while displaying the second portion of the frame (col.12, ln.1-18; note use of motion compensation to obtain the B-frame from data of the reference frame data I and P frames). Ozcelik does not specifically disclose "progressive frames". However, Uz teaches the displaying of progressive frames (col.4, ln.29-43; Uz discloses the decoding and displaying of progressive frames). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Ozcelik and Uz, as a whole, for efficiently displaying high quality progressive video images while reducing noise (UZ col.3, ln.11-13).

Regarding claim 7, Ozcelik discloses a circuit for displaying frames, said circuit comprising: a memory for storing a first portion of a frame (col.12, ln.35-41; Ozcelik

discloses that the frame memory 514C has a capacity to store 0.53x, where the first portion, ie. top field, is stored in 0.03x capacity of the frame memory 514C); a display engine for displaying the first portion of the frame (col.12, ln.19-34; Ozcelik discloses that the first portion, ie. top field, is displayed for a frame); and a controller for writing a second portion of the frame in the memory, while the display engine displays the first portion (col.12, ln.19-41; Ozcelik discloses the second portion, ie. bottom field, of the frame is written or buffered for storage while the first portion, ie. top field, is displayed). Ozcelik does not specifically disclose "progressive frames". However, Uz teaches the displaying of progressive frames (col.4, ln.29-43; Uz discloses the decoding and displaying of progressive frames). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Ozcelik and Uz, as a whole, for efficiently displaying high quality progressive video images while reducing noise (UZ col.3, ln.11-13).

Regarding claim 12, Ozcelik discloses wherein the memory further comprises: a first prediction frame buffer for storing a first prediction frame (fig.5, element 514B); a second prediction frame buffer for storing a second prediction frame (fig.5, element 514C); and a delta frame buffer for storing the first portion of the frame and the second portion of the frame (col.12, ln.19-41, note there is 0.03x capacity of the frame buffer 514C dedicated to storing the first portion, ie. top field, and 0.5x capacity of the frame buffer 514C dedicated to storing the second portion, ie. bottom field, so delta frame buffers are implemented). Ozcelik does not specifically disclose "progressive frames".

However, Uz teaches the displaying of progressive frames (col.4, ln.29-43; Uz discloses the decoding and displaying of progressive frames). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Ozcelik and Uz, as a whole, for efficiently displaying high quality progressive video images while reducing noise (UZ col.3, ln.11-13).

Regarding claim 15, Ozcelik discloses an integrated circuit for storing decoded frames, said integrate circuit comprising: a first prediction frame buffer for storing a first frame (fig.5, element 514A); a second prediction frame buffer for storing a second frame (fig.5, element 514B); and a delta frame buffer for storing a portion of a third frame (col.12, ln.19-41, note element 514C stores the third frame, and there is 0.03x capacity of the frame buffer 514C dedicated to storing the first portion, ie. top field, and 0.5x capacity of the frame buffer 514C dedicated to storing the second portion, ie. bottom field, so delta frame buffers are implemented).

Ozcelik does not specifically disclose "progressive frames". However, Uz teaches the displaying of progressive frames (col.4, ln.29-43; Uz discloses the decoding and displaying of progressive frames). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Ozcelik and Uz, as a whole, for efficiently displaying high quality progressive video images while reducing noise (UZ col.3, ln.11-13).

6. Claims 6, 13, 14, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ozcelik (5,903,311) in view of Uz (6,130,963) in view of Luna (6,298,087).

Regarding claim 6, Ozcelik does not specifically disclose wherein the progressive frame comprises a high definition television frame. However, Uz teaches the display of progressive video frames (col.4, ln.29-43; Uz discloses the decoding and displaying of progressive frames). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Ozcelik and Uz, as a whole, for efficiently displaying high quality progressive video images while reducing noise (UZ col.3, ln.11-13).

Ozcelik and Uz does not disclose the term "high definition television". However, Luna teaches "high definition television" (col.2, ln.41-46). Therefore, it would have been obvious to one of ordinary skill in the art to use well known term of "high definition television" for utilizing high quality display of video data for viewing clear images for viewing in high definition monitors and televisions so as to enjoy enhanced quality images when watching movies and televised programming.

Regarding claims 13 and 16, Ozcelik discloses the first, second and third frames (col.9, ln.31-39, note first and second and third frames are disclosed, ie. I, P and B frames), and the frames are stored in buffers no more than the size of 4 megabytes (col.4, ln.55-57, note 3X or approximately 3 megabytes is needed for buffering the frame data, where X is 1,036,800 bits or approximately 1 megabyte, to store frame data). Ozcelik and Uz do not specifically disclose the use of high definition television frames with at least 1280x720 resolution. However, Luna teaches the use of high

definition television frames with at least 1280x720 resolution (col.2, ln.41-46, note HDTV frame resolution can go up to 1920x1080 resolution). Therefore, it would have been obvious to one of ordinary skill in the art to use well known term of "high definition television" with at least a resolution of 1280x720 for utilizing high quality display of video data for viewing clear images for viewing in high definition monitors and televisions so as to enjoy enhanced quality images when watching movies and televised programming.

Regarding claims 14 and 17, Ozcelik discloses the first, second and third frames (col.9, ln.31-39, note first and second and third frames are disclosed, ie. I, P and B frames), and the frames are stored in buffers no more than the size of 8 megabytes (col.4, ln.55-57, note 3X or approximately 3 megabytes is needed for buffering the frame data, where X is 1,036,800 bits or approximately 1 megabyte, to store frame data). Ozcelik and Uz do not specifically disclose the use of high definition television frames with at least 1920x1080 resolution. However, Luna teaches the use of high definition television frames with at least 1920x1080 resolution (col.2, ln.41-46, note HDTV frame resolution can go to 1920x1080 resolution). Therefore, it would have been obvious to one of ordinary skill in the art to use well known term of "high definition television" with a resolution of 1920x1080 for utilizing high quality display of video data for viewing clear images for viewing in high definition monitors and televisions so as to enjoy enhanced quality images when watching movies and televised programming.

Conclusion

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen Wong whose telephone number is (571) 272-7341. The examiner can normally be reached on Mondays to Thursdays from 8am-6pm Flextime.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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7/27/08